

Northwestern Memorial Hospital

SUGGESTED EMPIRIC ANTIMICROBIAL THERAPY BY SITE OF INFECTION

Empiric antimicrobial guidelines are based on the most likely organisms responsible for infection, NMH susceptibilities, and prevalence of resistant organisms. Therapy may need to be adjusted once identification and susceptibility are determined.

Previous antimicrobial therapy may affect the susceptibility of organisms that subsequently cause infection. Close attention should be given to courses of antimicrobial therapy administered to patients in the recent past. In many cases, obtaining the appropriate specimen(s) before antibiotics are started is critical to successful outcomes of an infectious disease. Alterations in empiric antimicrobial therapy may be required.

Anatomic site /diagnosis	Common Pathogens	Preferred therapy	Alternative**	Comments
LUNG				
Pneumonia-community acquired	<i>S. pneumoniae</i> , <i>H. influenzae</i> , <i>Mycoplasma pneumoniae</i> , <i>Chlamydophila pneumophila</i> , <i>Legionella spp.</i> , viruses	Ceftriaxone + azithromycin (preferred for ICU) OR Levofloxacin (severe, confirmed beta-lactam allergy)	Levofloxacin (severe, confirmed beta-lactam allergy)	See NMH Community Onset Pneumoniae (CAP) Treatment for Non-ICU Patients ATS/IDSA CAP Guidelines
Pneumonia-community acquired in ICU	As above	ceftriaxone + azithromycin OR ceftriaxone + levofloxacin	Pneumonia-community acquired in ICU	If patient is critically ill, draw 2 sets of blood cultures. If gross hemoptysis, leukopenia, rapidly-progressing CXR, and/or lung necrosis or cavitation, add empiric MRSA coverage with linezolid. Antibiotic Therapy for Adults with CAP (Review). JAMA. Feb 2016
Pneumonia-community-acquired with identified increased risk for resistant Gm Negative pathogens	<i>Pseudomonas spp.</i> , Enterobacteriaceae	cefepime + azithromycin or piperacillin-tazobactam + azithromycin. PNA	vancomycin + aztreonam +/- amikacin (severe, confirmed betalactam allergy)	"Hospital-acquired pneumonia" refers to pneumonia that develops > 48 hours after admission. If MRSA is not isolated within 72 hours, MRSA coverage should be stopped
Pneumonia—hospital acquired	as above	cefepime + vancomycin or linezolid		IDSA HAP/VAP Guidelines

** Severe allergy to Preferred Therapy only

Pneumonia--ventilator-associated	as above	Cefepime + vancomycin or linezolid		
Pneumonia— aspiration, community acquired	Bacteroides spp., Peptostreptococcus spp, Fusobacterium spp., viridians group Streptococcus spp.	ampicillin/sulbactam or ceftriaxone +/- metronidazole	clindamycin or levofloxacin + metronidazole (severe, confirmed beta-lactam allergy)	See review of aspiration pneumonia.
Empyema Community-acquired	Streptococcus spp., Enterobacteriaceae, anaerobes	ceftriaxone + metronidazole Or ampicillin-sulbactam		ATS Empyema guidelines
Empyema Hospital-acquired	Streptococcus spp., <i>S. aureus</i> , Enterobacteriaceae, anaerobes	vancomycin + cefepime + metronidazole Or vancomycin + piperacillin-tazobactam	vancomycin + levofloxacin (severe, confirmed beta-lactam allergy)	